

SECTION 01019 - GENERAL PROJECT REQUIREMENTS

SPECIFIER S NOTE: *Insert wording, numbers, etc. as appropriate where [italics in parenthesis] are shown throughout this specification section. Italicized words are used for directions to the specifier and should be filled in. Blue colored text are Notes to Specifier and should be completely deleted from the final text. Red colored text is used for items to be modified. Maintain footer notation in italics with the current version used (e.g. TG01019 v00.04).*

SPECIFIER NOTES: *Add this section for all projects. Modify for major projects. Be sure to type without errors. Most paragraphs have major contract implications and must be presented verbatim.*

PART 1 - GENERAL

1.01 SUMMARY OF WORK

- A. Perform operations and furnish equipment, fixtures, appliances, tools, materials, related items and labor necessary to execute, complete and deliver the Work as required by the Contract Documents.

1.02 DIVISION OF WORK

- A. The Division and Sections into which these specifications are divided shall not be considered an accurate or complete segregation of work by trades. This also applies to work specified within each section
- B. Contractor shall not alter the Drawings and Specification. If an error or discrepancy is found, notify the Engineer. Comply with the GENERAL CONDITIONS Article 5 - CONTROL OF THE WORK. Should the Contractor deliberately fail to notify the Engineer, the Contractor will be held responsible for any cost involved in correction of work placed due to such discrepancy.
- C. Where devices, or items, or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many such devices, items or parts as are required to properly complete the Work.
- D. Specifications and Drawings are prepared in abbreviated form and include incomplete sentences. Omission of words or phrases such as the Contractor shall, as shown on the drawings, a, an, and the are intentional. Omitted words and phrases shall be provided by inference to form complete sentences
- E. Specifying of interface and coordination in the various Specification Sections is provided for information and convenience only. Such requirements in the various Sections shall complement the requirements of this Section.

SPECIFIER S NOTE: *Add other notification requirements to Section 1.03 if required. Confirm with Project Coordinator*

1.03 NOTIFICATION

- A. As a condition of the bidding requirements, contact and obtain permission from the Project Contact Person listed in Section 00800 SPECIAL CONDITIONS before visiting the site to examine the premises.

- B. Contact the Engineer and the Project Contact Person at least three (3) working prior to starting any onsite work.

1.04 SAFETY REQUIREMENTS

- A. The Hawaii Occupational Safety and Health Law, Chapter 396, Hawaii Revised Statutes, effective May 16, 1972, as amended, is applicable and made a part of the Contract. Carefully read and strictly comply with its requirements.
- B. Protect the facility personnel, students, and the public whenever power driven equipment is used. Ensure adequate safety precautions are used when operating any power driven equipment.

1.05 PERFORMANCE AND COORDINATION

- A. Contractor shall be in charge of the Work and the Project Contract Limits, as well as the directing and scheduling of all work. Contractor shall include general supervision, management and control of the Work of this project, and in addition to other areas more specifically noted throughout the Specifications. Final responsibility for performance, interface, and completion of the Work and the Project shall be the Contractor s.
- B. Jobsite Administration shall be the responsibility of the Contractor. Provide a competent superintendent on the job and provide an adequate staff to execute the Work. In addition, all workers shall dress neatly and conduct themselves properly at all times. Loud abusive behavior, sexual harassment and misconduct will not be tolerated. Workers found in violation of the above shall be removed from the job site as directed by the Engineer.
- C. The State of Hawaii will hold the Contractor liable for all the acts of Subcontractors and shall deal only with the Prime Contractor in matters pertaining to other trades employed on the job.
- D. Coordination: Provide project interface and coordination to properly and accurately bring together the several parts, components, systems, and assemblies as required to complete the Work pursuant to the GENERAL CONDITIONS and SPECIAL CONDITIONS.
 - 1. Provide interface and coordination of all trades, crafts and subcontracts. Ensure and make correct and accurate connections of abutting, adjoining, overlapping, and related work. Provide anchors, fasteners, accessories, appurtenances, and incidental items needed to complete the Work, fully, and correctly in accordance with the Contract Documents.
 - 2. Provide additional structural components, bracing, blocking, miscellaneous metal, backing, anchors, fasteners, and installation accessories required to properly anchor, fasten, or attach material, equipment, hardware, systems and assemblies to the structure.
 - 3. Provide excavation, backfilling, trenching and drilling for trades to install their work.
 - 4. Provide concrete foundations, pads, supports, bases, and grouting for trades as needed to install their work.
 - 5. Provide caulking, sealing, and flashing as required to waterproof the building complete and as required to insulate the building thermally and

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acoustically. Include sealing, flashing, and related work as required to prevent moisture intrusion, air infiltration, and light leakage.

6. Equipment, appliances, fixtures, and systems requiring plumbing and mechanical services, rough-in, and connections, or other utilities and services shall be provided with such services, rough-in, and final connections.
7. Equipment, appliances, fixtures, hardware, and systems requiring electrical services shall be provided with such electrical services, including outlets, switches, overload protection, interlocks, panelboard space, disconnects, circuit breakers, and connections.
8. Materials, equipment, component parts, accessories, incidental items, connections, and services required to complete the Work which are not provided by subcontractors shall be provided by the Contractor.

SPECIFIER S NOTE: Include Paragraph 1.06.A with all projects. Provide other paragraphs if needed. Confirm requirements with the Project Coordinator.

1.06 COOPERATION WITH OTHER CONTRACTORS

- A. The State reserves the right at any time to contract for or otherwise perform other or additional work within the Project Contract Limits. The Contractor of this project shall to the extent ordered by the Engineer, conduct its work so as not to interfere with or hinder the progress or completion of the work performed by the State or other contractors.

SPECIFIER S NOTE: Paragraph 1.06.B and subparagraphs are examples of wording for multiple contractor s and phased construction. Delete if not required, or if applicable modify to suite project. If appropriate to better define the requirements, provide a new section 01310 PROJECT MANAGEMENT AND COORDINATION or Section 01350 SPECIAL PROJECT PROCEDURES. Confirm requirements with the Project Coordinator.

- B. Multiple prime contractors performing work under separate agreements with the State will be present at the project location adjacent to and abutting the Project Contract Limits. This Contractor shall coordinate activities, sequence of work, protective barriers and any and all areas of work interfacing with other Prime Contractor s work. Contractor shall provide a continuity of finishes, walks, landscape, etc. at abutting Contract Limits so no additional work will be required. Any damage to other Prime Contractor s Work committed by this Contractor (or its subcontractors) shall be repaired promptly at no additional cost to the State. Contractor shall adjust and coordinate its work and operations as required by INCREMENT 2 work as part of the Work of this Contract without additional cost or delay to the State.

1. The State intends to construct INCREMENT 2 work during the execution of this Project. Construction of INCREMENT 2 is scheduled from *[January 2000 thru May 20XX]*. INCREMENT 2 consists of a *[description - example new library building, classroom addition that abuts this classroom building and related site work for both the library and classroom building addition]*. Refer to drawings for location of and limits of INCREMENT 2 work. Contractor shall adjust and coordinate its work and operations as required by INCREMENT 2 work as part of the Work of this Contract without additional cost or delay to the State.

2. Contractor shall schedule a meeting with the Engineer no later than thirty (30) days after Notice to Proceed to review the INCREMENT 2 contract documents developed as of that date. It is intended this Contractor becomes familiar with the scope of work in INCREMENT 2 and the areas affected.
3. The INCREMENT 2 Bidder shall study the work to be performed in INCREMENT 1 and bid on a basis of not interfering with or delaying the INCREMENT 1 Contractor. INCREMENT 2 Contractor shall provide the Engineer a weekly updated schedule and description of its work. This weekly update will be used to inform INCREMENT 1 Contractor of the INCREMENT 2 work schedule and also used by the Engineer to coordinate the efforts of both Increment Contractors.
4. This Contractor shall inform and coordinate its subcontractor(s) on the scope and required areas of work in INCREMENT 2. If the Contractor has any questions regarding its coordination, responsibilities or needs clarification as to the impact in schedule of its Work and the Work of INCREMENT 2, this Contractor shall notify Engineer in writing no later than 7 days after the review meeting.
5. Subject to approval by the Engineer, this Contractor shall amend and schedule its work and operations to minimize disruption to the work and operation of INCREMENT 2 Contractor.
6. Relocate and/or remove and replace temporary barriers, fencing, supports or bracing to allow work by others to proceed unimpeded. Do not remove required barriers supporting work until specified time or as approved by Engineer. If directed by Engineer, leave in-place any temporary barriers.
7. Coordinate work that abuts or overlaps work of INCREMENT 2 with the Engineer and other Prime Contractor to mutual agreement so that work is 100% complete with continuity of all materials, systems and finishes.
8. When directed by the Engineer, provide access into the construction zone to allow INCREMENT 2 Contractor to perform their work that must be interfaced with INCREMENT 1 work.

END Paragraph 1.06.B Example

SPECIFIER S NOTE: For most projects, include Section 01330 SUBMITTALS in these specifications. When providing Section 01330, include last sentence of Paragraph B. Confirm with the Project Coordinator.

1.07 SUBMITTALS

- A. Comply with the GENERAL CONDITIONS Section 5.4 SHOP DRAWINGS AND OTHER SUBMITTALS. Furnish required submittals specified in this Section and in the Technical Sections. Submittals include one or more of the following: shop drawings, color samples, material samples, technical data, material safety data information, schedules of materials, schedules of operations, guarantees, certifications, operating and maintenance manuals, and field posted as-built drawings.
- B. Required Submittals: Provide a comprehensive list of the required submittals by Specification Section. Furnish this list to the Engineer within fifteen (15)

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calendar days after award of the contract or upon earlier written instructions from the Engineer. *[A general listing is provided under Specification Section 01330 - Submittals.]*

1. The listing shall indicate and include the following:
 - a. The number of copies required for submittal.
 - b. Planned submittal date.
 - c. Approval date required by the contractor.
 - d. A space where the date of submittal can be inserted.
 - e. A space where the date of approval can be inserted.
 - f. A space where an action code can be inserted.
 2. The schedule shall accommodate a minimum of twenty-one (21) or (25) twenty five calendar days for the State's review, as applicable for the Island the project is located.
 3. An updated listing shall be prepared and submitted to the Engineer at monthly intervals or as directed by the Engineer. The listing shall reflect all approvals received since the last update.
- C. Record Drawings: Field Posted As-Built Drawings, the intent of which is to record the actual in-place construction so that any future renovations or tie-ins can be anticipated accurately, shall be prepared and submitted by the Contractor. To accomplish this, the following procedure shall be followed by the Contractor:
1. A full-size set of field posted as-built drawings shall be maintained at the job site. All deviations from alignments, elevations and dimensions which are stipulated on the drawings and authorizations given by the Engineer to deviate from the drawings shall be clearly and accurately recorded by the Contractor on this set of record drawings.
 2. Changes shall be recorded immediately after they are constructed in place to assure they are not forgotten. Record the changes in red pencil and where applicable, refer to the authorizing document or Change Order. The field posted as-built drawings shall be made available to the Engineer at any time so that its clarity and accuracy can be monitored.
 3. The words FIELD POSTED AS-BUILT shall be labeled on the title sheet and certified by the Contractor as to accuracy and completeness as shown below:

FIELD POSTED AS-BUILT

Certified By: _____ Date: _____
Contractor (Include name and company)

4. The words FIELD POSTED AS-BUILT shall be labeled on all sheets in the margin space to the right of the sheet number written from the bottom upward.
5. The Index to Drawings shall be revised with the label FIELD POSTED AS-BUILT for each sheet. The index shall conclude with the following note: A COMPLETE SET CONTAINS ____ SHEETS with the total number of sheets comprising the set to be placed in the blank.

6. Any FIELD POSTED AS-BUILT drawing which the Engineer determines does not accurately record the deviation may be corrected by the State and the Contractor shall be charged for the services.
 7. Submit the set of FIELD POSTED AS-BUILT drawings to the Engineer no later than five (5) calendar days prior to the date of final inspection.
 8. AS-BUILT drawings will be prepared by the design consultant using the FIELD POSTED AS-BUILT. Both sets of drawings will be sent to the Contractor for review and approval. The Contractor shall retain the FIELD POSTED AS-BUILT drawings for records, sign the AS-BUILT set of drawings, indicating approval, and return the drawings in a timely manner to the Engineer.
- 1.08 CONSTRUCTION SCHEDULE - CRITICAL PATH METHOD (CPM):
- A. Contractor shall prepare and submit three sets of its Construction Schedule for review within fifteen (15) calendar days after the Notice to Proceed or upon earlier written instructions from the Engineer.
 - B. The schedule shall be related to the entire project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the work. If requested by the Engineer, the Contractor shall participate in a preliminary meeting to discuss the proposed schedule and requirements prior to submission of the schedule.
 - C. The Construction Schedule shall indicate the following:
 1. Elements of the Project in detail time scaled by month or by week, and a project summary.
 2. The order and interdependence of activities and the sequence in which the work is to be accomplished.
 3. How the start of a given activity is dependent upon the completion of preceding activities and how its completion restricts the start of following activities.
 4. The submittal and approval of shop drawings, samples, procurement of critical materials and equipment, receipt of materials with estimated costs of major items for which payment will be requested in advance of installation, fabrication of special materials and equipment, and their installation and testing.
 5. Activities of the State which have an effect on the progress schedule (e.g. required delivery dates for State furnished materials and equipment).
 6. The description of the activity and the duration of time in calendar days.
 - a) For each activity indicate the early start, early finish, late start, late finish dates and total float time.
 - b) Float means the amount of time between the early start date and the late start date, or the early finish date and late finish date for any of the activities noted on the CPM Schedule.

- c) The Critical Path is made up of activities which control the total length of the project. It is by definition, the longest path through the schedule. For this project, a critical activity shall be any activity with less than five (5) days of total float.
- 7. The party responsible for the accomplishment of the activity. As a minimum, indicate responsibility for each subcontractor.
- 8. Contract-required dates for completion of all or parts of the Work.
- 9. Non-work days (e.g. Holidays, exclusionary non-work days).
- D. Upon completion of the Engineer's review, the Contractor shall amend the schedule as necessary to reflect comments made by the Engineer. If necessary, the Contractor shall participate in a meeting with the Engineer to discuss the proposed schedule and changes required. Submit the revised schedule for review to the Engineer within seven (7) calendar days after receipt of the Engineer's comments.
- E. Use the reviewed schedule for planning, organizing and directing the work, for reporting progress, and for requesting payment for the work completed. Do not make changes to the reviewed schedule without written approval of the Engineer.
- F. Should changes to the schedule be desired, submit a request in writing to the Engineer and indicate the reasons for the proposed change. Should the Engineer consider the change to be major, the Engineer may require the Contractor to revise and resubmit the schedule at no additional cost to the State. Contractor shall mitigate the impact of all changes by readjusting the sequence of activities, duration of time, or resources utilizing available float.
 - 1. A change shall be considered major if, in the opinion of the Engineer, the change may affect the substantial completion date or other contractual and milestone dates.
 - 2. Minor changes are those that only affect activities with adequate float time.
- G. Once the schedule has been reviewed by the Engineer, the Contractor shall furnish to the Engineer three (3) copies of the schedule within fifteen (15) calendar days.
- H. Throughout the duration of the project, the Engineer reserves the right to request more detailed breakdowns of activities, logic, and schedule submittals from the Contractor at no additional cost to the State.
- I. Updated schedules shall be prepared and submitted to the Engineer at monthly intervals or as directed by the Engineer. The schedule shall reflect all changes occurring since the last update including the following:
 - 1. Activities started and completed during the previous period.
 - 2. The estimated duration to complete each activity which was started but not completed.

3. Percentage of cost payable for each activity.
 4. Modifications and pending proposed changes.
 5. Narrative report describing current and anticipated problem areas and / or delaying factors with their impact together with an explanation of corrective actions taken or proposed.
- J. Failure on the part of the Contractor to submit updated schedules may be grounds for the Engineer to withhold progress payments for items noted on the schedule.
- K. Contractor shall prosecute the work according to the CPM Schedule. The Engineer shall rely on the reviewed Contractor's CPM Schedule and regular updates for planning and coordination. The Engineer's review of the Contractor's CPM Construction Schedule does not relieve the Contractor of its obligation to complete the work within the allotted contract time. Nor does the review grant, reject or in any other way act on the Contractor's request for adjustment(s) to complete remaining contract work, or for claims of additional compensation. Such requests shall be processed in accordance with other relevant provisions of the contract.
- L. If the State issues a Field Order or Change Order or requires Force Account Work that affects the sequence or duration of work activities noted on the construction progress schedule, the Contractor shall promptly update the schedule. This shall be accomplished by adding, deleting or revising the work activities noted or changing the logic in the schedule to show the Contractor's plan for incorporating the change into the flow of work. All Change Orders and Time Extension requests that affect the construction schedule shall be evaluated based on their impact on the approved Construction Schedule.
- M. If the current work is behind schedule or projected to be behind schedule, such as negative float on a critical activity and / or inability to meet the Contract Completion Date, the Engineer may require the Contractor, at the Contractor's cost, to take remedial measures to get the project back on schedule. This may require increasing the work force, working overtime and weekends, air freighting materials, or other similar actions.
- N. If at any time the Engineer determines that any critical activity has fallen behind the CPM schedule by 15 calendar days or more, Contractor shall submit a remedial plan to recapture the lost scheduled time. Include a revised schedule. Furnish the remedial plan no later than 7 calendar days from Engineer's notification.
- O. If an accelerated schedule is proposed, refer to GENERAL CONDITIONS Section 7.22 CONSTRUCTION SCHEDULE.

SPECIFIER S NOTE: Include Meetings Paragraphs if needed for your project. Confirm requirements with the Project Coordinator. Use one option for Paragraph A, delete other paragraphs not used.

1.09 MEETINGS

Option 1

- A. Unless noted elsewhere in these Specifications, Scheduled meetings are not anticipated for this project. However, the Contractor and / or the Engineer may request that periodic meetings be held. Time and location shall be

mutually agreed to. Refer to Sections 01310 PROJECT MANAGEMENT AND COORDINATION or Section 01350 SPECIAL PROJECT PROCEDURES if provided in these Specifications.

Option 2

- A. Scheduled weekly meetings will be held to discuss the progress of the Work. Refer to [Section 01310 PROJECT MANAGEMENT AND COORDINATION or Section 01350 SPECIAL PROJECT PROCEDURES].

Option 3

- A. Contractor shall meet with the Engineer, weekly or other interval as determined by the Engineer, to discuss the progress of the Work. Contractor and / or the Engineer shall determine whose attendance shall be required. Meetings shall be held in the Contractor's field office on the same time and day weekly. Coordinate any changes to date and time and meeting location with the Engineer.

SPECIFIER'S NOTE: For major project or multi-phased projects, include Paragraph 1.09.B. Modify to suite project or delete if not required. Confirm with the Project Coordinator.

- B. For each meeting, Contractor shall take meeting minutes and provide a list stating all items, work or material, which may cause a delay or have an impact on the project's contractual dates. The list shall be inclusive of items requiring action from all responsible parties such as outstanding submittal status, request for information (clarification), force account work, change order, and change proposals. The format of this list shall be at the Contractor's discretion, subject to the Engineer's approval. Submit the list to all parties for discussions as a meeting agenda. Contractor shall provide a plan of corrective action for any item which is delayed or expected to be delayed, where that item impacts the contractual dates.

END MEETING Paragraph

SPECIFIER'S NOTE: Make sure Project Contract limits are shown on the Drawings.

1.10 PROJECT AND SITE CONDITIONS

- A. Project Contract Limits (Contract Zone Limits) shown on the drawings indicate only in general the limits of the work involved. Perform necessary and incidental work which may fall outside of these demarcation lines. Confine construction activities within the Project Contract Limits and do not spread equipment and materials indiscriminately about the area.
- B. Disruption of Utility Services - Pre arrange work related to the temporary disconnection of electrical and other utility systems with the Project Contact Person listed in Section 00800 SPECIAL CONDITIONS and the Engineer. Notify the Engineer at least fifteen (15) days in advance of any interruption of existing utility service. Time and duration of interruptions is subject to the Engineer's approval. Keep the utility interruptions and duration to a minimum so as not to cause inconvenience or hardship to the facility. If temporary electrical and / or other utility systems hook-up is required, provide the necessary services. Pay for temporary services as part of the contract, unless specifically noted otherwise in the specifications.
- C. Contractor's Operations - Provide means and methods to execute the Work and minimize interruption or interference to the facility's operations. Rearrange the construction schedule when construction activities results in interruptions that hamper the operations of the facilities.

- D. Maintain safe passageway to and from the facility's occupied buildings, rooms and other occupied spaces for the using agency personnel and the public at all times.
- E. Contractor, subcontractor(s) and their employees will not be allowed to park in zones assigned to users and/or facility personnel. Areas to be used by the Contractor shall be designated by the Engineer. Any lawn when damaged by the Contractor shall be restored as directed by the Engineer. Pay for restoration costs as part of the contract. **Refer to Sections 01140 WORK RESTRICTIONS or Section 01350 SPECIAL PROJECT PROCEDURES if provided in these Specifications.**

SPECIFIER'S NOTE: For projects within the State Capitol District, delete paragraph 1.10.E above and substitute the following Paragraph E and subparagraphs 1 & 2.

- E. Contractors, Subcontractors and equipment service companies doing business within the Hawaii Capitol District will be assessed appropriate parking fees whenever parking for more than five working days.
 - 1. Parking stalls will be assigned only to the company vehicles. Check with the Automotive Management Division (telephone 586-0351) regarding number and cost of stalls required for the duration of this contract. Each stall shall be assessed at the current rate per month as established by TITLE 3, Administrative Rules, Department of Accounting and General Services, Chapter 30, Rules Governing Parking on State Lands. If the Work involved is less than five working days, check with the Automotive Management Division to coordinate parking requirements.
 - 2. Areas to be used by the Contractor other than assigned stalls shall be designated by the Engineer. Any lawn damaged by the Contractor shall be restored, as directed by the Engineer. Pay for restoration costs as part of the contract.

PART 2 - MATERIALS

2.01 QUALITY

Materials, items, equipment and fixtures specified in the various Divisions and Sections shall be new unless otherwise specified.

2.02 STORAGE AND HANDLING

- A. Contractor shall supervise jobsite delivery and handling, and assign storage space for materials, items, equipment and fixtures of all trades. Contractor and installer are responsible for delivery, unloading, unpacking, handling, storage, distribution, installation and protection of its materials at the jobsite.
- B. Except as otherwise required by these specifications or by the Engineer, determine and comply with manufacturer(s) recommendation(s) on product handling, storage and protection.
- C. Deliver products to the jobsite in manufacturer's original containers, with labels intact and legible. Maintain packaged material with seals unbroken and labels intact until time of use. Promptly remove damaged materials and unusable items from the jobsite, and promptly replace with material meeting the specified requirements, at no additional cost to the State.

- D. The State may reject as non-complying such material and products that do not bear identification satisfactory to the State as to manufacturer, grade, quality, and other pertinent information.

PART 3 - EXECUTION

3.01 EXAMINING THE SITE

- A. Contractor and Subcontractors are expected to visit the site and make due allowances for difficulties and contingencies to be encountered. Compare contract documents with work in place. Become familiar, with existing conditions, the conditions to be encountered in performing the Work, and the requirements of the drawings and specifications.
- B. Verify construction lines, grades, dimensions and elevations indicated on the drawings before any clearing, excavation or construction begins. Any discrepancy shall be immediately brought to the attention of the Engineer, and any change shall be made in accordance with the Engineer's instruction. Contractor shall not be entitled to extra payment if it fails to report the discrepancies before proceeding with any work whether within the area affected or not.
- C. Obtain all field measurements required for the accurate fabrication and installation of the Work included in this Contract. Exact measurements are the Contractor's responsibility.
- D. Furnish or obtain templates, patterns, and setting instructions as required for the installation of all Work. All dimensions shall be verified in the field.

SPECIFIER'S NOTE: For Major Projects, modify Paragraph 3.01.E and generally describe the existing conditions [italic passages to be described /modified].

- E. The Contractor shall accept the site [and the existing building(s)] in the condition which exists at the time access is granted to begin the Work.
 - 1. Verify existing conditions and dimensions shown and other dimensions not indicated but necessary to accomplish the Work.
 - 2. Locate general reference points and take action to prevent their destruction. Lay out work and be responsible for lines, elevations and measurements and the work executed. Exercise precautions to verify figures and conditions shown on drawings before layout of work.
 - 3. Before starting the Work, the Contractor and each Subcontractor, shall verify governing dimensions and shall examine adjoining work on which the Contractor's work is in any way dependent. No additional compensation will be allowed on account of differences between actual measurements and dimensions shown. Submit differences discovered during the verification work to the Engineer for interpretations before proceeding with the associated work.

SPECIFIER'S NOTE: Delete paragraphs 3.02.F thru J where there is no site work and utility connections, such as interior renovations. If in doubt, leave paragraphs 3.02.F thru J in this Section. Confirm with the Project Coordinator.

3.02 SITE UTILITIES AND TONING

- A. Cooperate, coordinate and schedule the work to suit the owners of underground or overhead utility lines or other property in removing or altering such lines or providing new services in order for the work to progress according to the contract. Cooperation includes rearranging construction operations and work schedules in order to accommodate the operations and work of the utilities and/or other property in and around the work site.
- B. Contractor shall contact all the various utility companies before the start of the work to ascertain any existing utilities and to develop a full understanding of the utility requirements with respect to this project. Furnish the Engineer with evidence that the utility companies were contacted.
- C. Should the Contractor discover the existence and location of utilities in the contract drawings are not correct, do not disturb the utilities and immediately notify the Engineer. The Engineer will advise the Contractor regarding actions to take.
- D. Any utilities that the Contractor encounters during the progress of the work, such as telephone ducts, communication ducts, electric ducts, water lines, gas lines, sewer lines, electric lines and drainage pipes, whether shown or not on the contract drawings, shall not be disturbed or damaged unless otherwise instructed in the drawings and specifications or as directed by the Engineer. Contractor shall repair and restore to pre-damaged condition any utilities or any other property the Contractor damaged.
- E. Contractor shall transfer to their Field Posted As-Built drawings the location(s) of new and existing utilities that differ from the Contract Drawings.

SPECIFIER S NOTE: Delete paragraphs 3.02.F thru J where there is no site work and utility connections. If in doubt, leave paragraphs 3.02.F thru J in this Specifications.

- F. Prior to the start of grading, excavation work or trenching, the Contractor shall verify and confirm the presence, location and depth of existing underground utility lines in the area affected by the project, by toning or other appropriate means acceptable to the Engineer. The intent of this advanced toning is to afford the State an opportunity to identify the utility lines that may or may not be shown on the drawings and issue a change order and / or directive which may be necessary to address their presence. If toning is not performed prior to the start of grading, excavation or trenching work, Contractor shall repair or replace damaged utility lines at its cost.
- G. Toning shall be performed using instruments specifically developed and designed for the detection of underground pipe and cable utilities. Use of instruments such as divining or dowsing rods are not considered toning and are not acceptable.
- H. Contractor shall give the Engineer a minimum of 24 hours advance notice of its proposed toning work and of the method of toning proposed to be used. Upon completion of the toning operation, Contractor shall:
 - 1. Inform the Engineer, in writing, where utility lines are found as indicated on the drawings and no new utility lines are found. Also, where utility lines indicated on the drawings are not shown in their approximate location or where new utility lines are found or pointed out to the Contractor in the field.

2. Submit a sketch to the Engineer indicating the location and approximate depth of the lines. The State will identify the type of utility lines found and provide the Contractor with directions on their disposition. Do not proceed with any excavation or trenching work until so directed by the Engineer.
- I. After ascertaining the exact location and depth of utilities within the project area, mark such locations to warn workers or equipment operators of their existence and location. Also, be responsible to acquaint personnel working near utilities with the type, size location, depth of the utilities and the consequences that might result from disturbances. Do not start trenching or start similar operations until reasonable and appropriate precautions to protect the utilities are taken.
 - J. For new utilities that were not shown on the drawings but discovered during toning or pointed out in the field, the Contractor shall proceed with care in the excavation.
 1. Where directed by the Engineer, excavation performed within 2 feet of the line shall be done manually to avoid damage. The excavation shall be considered to be additional work as covered under GENERAL CONDITIONS subsection 4.2 CHANGES.
 2. Newly identified utilities which must be relocated or otherwise disturbed due to new construction shall be considered to be additional work as covered under GENERAL CONDITIONS subsection 4.2 CHANGES.

END Paragraphs 3.02 E thru J

SPECIFIER S NOTE: Confirm if the Contractor will be allowed temporary use of electricity by the facility. If so modify Paragraph 3.03.A.

3.03 UTILITY SERVICE

- A. Electricity - Make arrangements with utility companies for temporary use of electricity for construction use. Pay for all expenses pertaining thereto.
- B. Telephone - Make arrangements with the utility companies for temporary use of telephone for construction use. Pay for all expenses pertaining thereto.

SPECIFIER S NOTE: Confirm if the Contractor will be allowed temporary use of water by the facility. If so, add the conditions for temporary tapping into the facilities water system, modify Paragraph 3.03.C to include bracketed text and add subparagraphs 1 thru 5.

- C. Water - Make arrangements with the utility company for temporary use of water. Pay for all expenses pertaining thereto. **[However, at the option of the Contractor, a temporary tap into the facility s existing water system is allowed, subject to the following conditions:]**
 1. Comply with the Department of Health s requirements when tapping into the existing water system. Pay all expenses to tap into the water system.
 2. Provide a proper water meter on the tapped line. All water used shall be registered by this meter.

3. Upon hook up and prior to water use, notify the Engineer to take an initial meter reading.
4. Pay the State, on a monthly basis, for all water used for the project at the current rate per 1,000 gallons. Take all monthly meter readings for such payments.
5. Payments are to be by check, made payable to the Director of Finance, State of Hawaii and mailed to:

SPECIFIER S NOTE: Obtain information from Project Coordinator. If cannot obtain the information insert the following.

[Obtain information from the Engineer]

Office:

Department:

Address:

Attention:

6. Checks shall be accompanied by the following information:
 - a. Name of facility, **Project Title and DAGS Job No.[00-00-0000]**
 - b. Contractor s name
 - c. Initial meter reading for the month and final meter reading for the month
 - d. Volume of water used and the amount due in payment for that water
7. Upon completion of the project and just prior to removal of the water meter, notify the Engineer to take a final meter reading.
8. Should the Contractor at any time fail to comply with any or all of the above conditions, the State reserves the right to terminate the use of water. The Contractor shall remove the hookup within 48 hours of notification of such termination.

End Paragraph 3.03.C

3.04 ENVIRONMENTAL

- A. General Contractor shall oversee that proper environmental conditions are met regarding temperature, humidity, lighting and ventilation.

3.05 PREPARATION AND PROTECTION

- A. Protection of Property: Continually maintain adequate protection of the Work from damage and protect all property, including but not limited to buildings, equipment, furniture, grounds, vegetation, material, utility systems located at and adjoining the job site. Repair, replace or pay the expense to repair damages resulting from Contractor s fault or negligence.
- B. Before starting work to be applied to previously erected constructions, make a thorough and complete investigation of such recipient surfaces and determine their suitability to receive required additional construction and finishes. Contractor, at its expense, shall make whatever repairs and conditioning required to properly prepare such surfaces. Contractor shall coordinate the work to provide a suitable surfaces to receive following work.

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- C. Commencement of work by any trade will be construed as acceptance of existing conditions and surfaces as being satisfactory for application of subsequent work, and full responsibility for finished results and assumption of warranty obligations under the Contract.
- D. Protect existing work in a manner to prevent damage including interior work from damage by vandals or the elements. Provide temporary protection. Use curtains, barricades, or other appropriate methods. Take positive measures to prevent breakage of glass and damage to plastic, aluminum and other finishes.
- E. Repairs and Replacements: In event of damage, promptly make replacements and repairs to the approval of the Engineer and at no additional cost to the State. Additional time required to secure replacements and to make repairs will not be considered by the State to justify an extension in the Contract Time or completion.

SPECIFIER S NOTE: For minor projects or interior projects, modify or delete the barricade requirements. Check that other specification sections do not specify conflicting requirements for barricades. Should more stringent barricade requirements be needed, revise these paragraphs accordingly or provide new Section 01560 TEMPORARY BARRIERS AND ENCLOSURES.

3.06 BARRICADE

- A. Erect temporary construction barricade(s) to prevent unauthorized persons from entering the project area and to the extent required by the Engineer. At a minimum, construct barricades using industry standard 4 feet high plastic fencing with metal (or wood) post supports at 10 feet on center connected with a top and bottom 12 -gauge soft annealed galvanized tie wires securely connected to posts. Posts shall be capable of resisting a lateral load of 100 lbs measured at the top of the post.
- B. Maintain temporary construction barricade(s) throughout the duration of the Work. During the course of the project, the Engineer may require additional barricades be provided for the safety of the public. Contractor shall erect the additional barricade(s) at its own expense.

SPECIFIER S NOTE: Delete if not applicable or modify paragraph 3.06.C.

- C. If provided in these Specifications, refer to Sections 01560 TEMPORARY BARRIERS AND ENCLOSURES or 01568 GOOD NEIGHBOR BARRIER. Provide the barriers/barricades required by Sections 01560 or 01568 in lieu of the barricade specified in paragraph 3.06.A.

3.07 INSTALLATION

- A. Materials, items, fixtures required by the various Divisions and Sections of the Specifications shall be installed in accordance with Contract Documents, by workers specially trained and skilled in performance of the particular type of work, to meet guarantee and regulatory agency requirements. Should the drawings or specifications be void of installation requirements, install the materials, items, fixtures in accordance with the manufacturer's current specifications, recommendations, instructions and directions.

3.08 CUTTING AND PATCHING

- A. General Contractor shall oversee cutting and patching of concrete, masonry, structural members and other materials where indicated on drawings and as job conditions require. Unless noted elsewhere in the Drawings and

Specifications, no cutting or patching of existing or new structural members will be permitted without previously notifying the Engineer.

- B. Patch materials and workmanship shall be of equal quality to that indicated on the drawings or specified for new work.

3.09 CLEAN-UP

Rubbish and debris resulting from work of the various Divisions and Sections of the specifications shall be collected and disposed of by the Contractor at legal disposal areas away from the project site. Clean up and remove from premises all debris accumulated from operations from time to time and as directed by the Engineer. Permission to provide on-site trash containers shall be granted by the Department and shall be placed where directed by the Engineer. See also GENERAL CONDITIONS Section 7.30 FINAL CLEANING.

END OF SECTION